| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 386489 | 174$.ccls. or 361$.ccls. or 428$.ccls. or 257$.ccls. | USPAT | OR | OFF | 2005/09/30 12:50 |
| L2 | 3000 | L1 and (((Cu or copper)near laminat$3) or ((Cu or copper) near clad)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:41 |
| L3 | 2568 | L2 and (etch$3 or fill$2 or (standoff or (stand off) or (stand-off))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:42 |
| L4 | 1923 | L2 and ((PCB or (printed near board) or ( circuit near board) or (wiring near board))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:42 |
| L5 | 125480 | 174$.ccls. or 361$.ccls. | USPAT | OR | OFF | 2005/09/30 12:03 |
| L6 | 22 | 174/260-266 and @py>"204" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:08 |
| L7 | 4 | 174/260-266 and @py>"2004" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:09 |
| L8 | 315 | 174/260-266.ccls. and @py>"2004" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:09 |
| L9 | 315 | 174/260-266.ccls. and @py>"2004" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:09 |
| L10 | 315 | 174/260-266.ccls. and @py>"2004" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:25 |
| L11 | 2 | "6090474".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:34 |
| L12 | 18021 | (((Cu or copper)near laminat$3) or ((Cu or copper) near clad)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:41 |
| L13 | 4518740 | (etch$3 or fill$2 or (standoff or (stand off) or (stand-off))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:45 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L14 | 10675 | 12 and 13 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:43 |
| L15 | 454273 | ((PCB or (printed near board) or ( circuit near board) or (wiring near board))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:44 |
| L16 | 6696 | 14 and 15 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:43 |
| L17 | 5493 | 12 same 13 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:46 |
| L18 | 1979 | 17 same 15 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:43 |
| L19 | 411 | 1 and 18 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:44 |
| L20 | 4180576 | (fill$2 or (standoff or (stand off) or (stand-off))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:45 |
| L21 | 1066 | 17 same (via or (through near hole) or throughhole or opening) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:47 |
| L22 | 454492 | 21 same2 15 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:48 |
| L23 | 32070 | 1 and 22 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:47 |
| L24 | 434 | 21 same 15 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:48 |
| L25 | 91 | 24 and 1 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:52 |
| L26 | 386489 | 174$.ccls. or 361$.ccls. or 428$. ccls. or 257$.ccls. or 029$.ccls. | USPAT | OR | OFF | 2005/09/30 12:51 |

| L27 | 680639 | 174$.ccls. or 361$.ccls. or 428$.ccls. or 257$.ccls. or 29$.ccls. | USPAT | OR | OFF | 2005/09/30 12:51 |
| L28 | 106 | 24 and 27 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:52 |

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1163 | 174/250.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 15:27 |
| S1 | 1 | ("6,454,154").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 10:07 |
| S2 | 0 | ("L1andsubstrate").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 10:08 |
| S3 | 1 | S1 and substrate | USPAT | OR | OFF | 2004/12/07 10:21 |
| S4 | 482923 | S1 or substrate | USPAT | OR | OFF | 2004/12/07 10:10 |
| S5 | 0 | S1 and standoff | USPAT | OR | OFF | 2004/12/07 10:11 |
| S6 | 22 | hole-fill | USPAT | OR | OFF | 2004/12/07 11:24 |
| S7 | 241067 | "257" hole-fill | USPAT | OR | OFF | 2004/12/07 11:25 |
| S8 | 126359 | "257".clas. | USPAT | OR | OFF | 2004/12/07 11:38 |
| S9 | 318 | S8 and "fill hole" | USPAT | OR | OFF | 2004/12/08 08:36 |
| S10 | 4 | S9 and tooling | USPAT | OR | OFF | 2004/12/07 11:28 |
| S11 | 1 | S9 and standoff | USPAT | OR | OFF | 2004/12/07 11:30 |
| S12 | 556 | S8 and standoff | USPAT | OR | OFF | 2004/12/07 11:31 |
| S13 | 238 | S12 and hole | USPAT | OR | OFF | 2004/12/07 11:32 |
| S14 | 53 | S13 and fill | USPAT | OR | OFF | 2004/12/07 11:32 |
| S15 | 1844 | S8 and fixture | USPAT | OR | OFF | 2004/12/07 11:39 |
| S16 | 0 | S15 and fill-hole | USPAT | OR | OFF | 2004/12/07 11:39 |
| S17 | 715 | S15 and hole | USPAT | OR | OFF | 2004/12/07 12:39 |
| S18 | 3747 | 174/260-266.ccls. | USPAT | OR | OFF | 2004/12/07 12:40 |
| S19 | 30 | S18 and "filling hole" and @py<"2001" | USPAT | OR | OFF | 2004/12/07 12:46 |
| S20 | 274 | S18 and apparatus and hole and @py<"2001" | USPAT | OR | OFF | 2004/12/07 13:02 |
| S21 | 1 | ("5244143").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:04 |
| S22 | 1 | ("5971058").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:05 |
| S23 | 1 | ("6029882").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:09 |
| S24 | 1 | ("5673846").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:12 |
| S25 | 1 | ("5982038").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:13 |
| S26 | 1 | ("6056191").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:14 |

| S27 | 1 | ("5965043").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:15 |
|-----|---|-----------------|--------------|-----|-----|------------------|
| S28 | 1 | ("5576052").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:16 |
| S29 | 1 | ("5515604").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:17 |
| S30 | 1 | ("4597826").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:20 |
| S31 | 1 | ("6002177").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:21 |
| S32 | 1 | ("5667418").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:22 |
| S33 | 0 | ("257and@py<201and(fill$hole)").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:23 |
| S34 | 0 | ("257and@py<201and(fill$hole)").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 13:23 |
| S35 | 126359 | "257".clas. | USPAT | OR | OFF | 2004/12/07 13:25 |
| S36 | 27931 | S35 and @py<"2001" and (fill hole) | USPAT | OR | OFF | 2004/12/07 13:26 |
| S37 | 174 | S35 and @py<"2001" and "fill hole" | USPAT | OR | OFF | 2004/12/07 13:27 |
| S38 | 355902 | Injection | USPAT | OR | OFF | 2004/12/07 13:46 |
| S39 | 129823 | S38 and (via or hole) and @py<"2001" | USPAT | OR | OFF | 2004/12/07 13:47 |
| S40 | 55138 | S39 and fill$ | USPAT | OR | OFF | 2004/12/07 13:48 |
| S41 | 250 | S40 and standoff | USPAT | OR | OFF | 2004/12/07 14:09 |
| S42 | 0 | S39 and fill4 | USPAT | OR | OFF | 2004/12/07 14:10 |
| S43 | 55138 | S39 and fill$ | USPAT | OR | OFF | 2004/12/07 14:11 |
| S44 | 55138 | S43 and (via or hole) | USPAT | OR | OFF | 2004/12/07 14:12 |
| S45 | 5 | S43 and divice | USPAT | OR | OFF | 2004/12/07 14:14 |
| S46 | 12425 | S43 and substrate | USPAT | OR | OFF | 2004/12/07 14:14 |
| S47 | 2194 | S46 and sold$ | USPAT | OR | OFF | 2004/12/07 14:15 |
| S48 | 160 | S47 and through-hol$ | USPAT | OR | OFF | 2004/12/07 14:16 |
| S49 | 1 | ("5145691").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 15:59 |
| S50 | 1 | ("5191709").PN. | USPAT; USOCR | OR | OFF | 2004/12/07 15:59 |
| S51 | 126359 | "257".clas. | USPAT | OR | OFF | 2004/12/08 08:30 |
| S52 | 27931 | S51 and @py<"2001" and (fill hole) | USPAT | OR | OFF | 2004/12/08 08:32 |
| S53 | 14581 | S52 and (etched hole-fill) | USPAT | OR | OFF | 2004/12/08 08:32 |
| S54 | 25472 | S52 and (etched hole) | USPAT | OR | OFF | 2004/12/08 08:32 |
| S55 | 719385 | S54 and feature for fill hole | USPAT | OR | OFF | 2004/12/08 08:33 |
| S56 | 25472 | S54 and (feature for fill hole) | USPAT | OR | OFF | 2004/12/08 08:34 |
| S57 | 240805 | S54 and [feature for fill hole] | USPAT | OR | OFF | 2004/12/08 08:34 |

| S58 | 231411 | S54 and [feature fill hole] | USPAT | OR | OFF | 2004/12/08 08:34 |
|---|---|---|---|---|---|---|
| S59 | 231404 | S54 and [feature fill via] | USPAT | OR | OFF | 2004/12/08 08:35 |
| S60 | 232068 | S54 and [feature fill via]and [copper layer] | USPAT | OR | OFF | 2004/12/08 08:35 |
| S61 | 126359 | "257".clas. | USPAT | OR | OFF | 2004/12/08 08:37 |
| S62 | 318 | S61 and "fill hole" | USPAT | OR | OFF | 2004/12/08 09:24 |
| S63 | 15 | S62 and [etched hole] | USPAT | OR | OFF | 2004/12/08 10:35 |
| S64 | 1 | S61 and "fill etched hole" | USPAT | OR | OFF | 2004/12/08 09:25 |
| S65 | 178 | S61 and "etched hole" | USPAT | OR | OFF | 2004/12/08 09:42 |
| S66 | 11592 | S61 and pin | USPAT | OR | OFF | 2004/12/08 09:43 |
| S67 | 0 | S66 and fill-holl | USPAT | OR | OFF | 2004/12/08 09:43 |
| S68 | 4856 | S66 and hole | USPAT | OR | OFF | 2004/12/08 09:44 |
| S69 | 1916 | S66 and fill | USPAT | OR | OFF | 2004/12/08 09:44 |
| S70 | 3321 | S66 and etched | USPAT | OR | OFF | 2004/12/08 09:45 |
| S71 | 792 | S69 and etched | USPAT | OR | OFF | 2004/12/08 09:45 |
| S72 | 518 | S71 and via | USPAT | OR | OFF | 2004/12/08 09:49 |
| S73 | 0 | S71 and via and coppeer | USPAT | OR | OFF | 2004/12/08 09:49 |
| S74 | 304 | S71 and via and copper | USPAT | OR | OFF | 2004/12/08 09:59 |
| S75 | 154 | S71 and via and copper and @py<"2001" | USPAT | OR | OFF | 2004/12/08 09:59 |
| S76 | 15 | S61 and [etched hole] | USPAT | OR | OFF | 2004/12/08 10:37 |
| S77 | 6638906 | S61 and [etched hole]and @py<"2001" | USPAT | OR | OFF | 2004/12/08 10:39 |
| S78 | 15 | S61 and [etched hole] | USPAT | OR | OFF | 2004/12/08 10:43 |
| S79 | 388 | etched adj hole | USPAT | OR | OFF | 2004/12/08 10:44 |
| S80 | 0 | ("20030215568.pn.").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2005/07/12 18:07 |
| S81 | 2 | "20030215568".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/07/12 18:07 |
| S82 | 2 | "6139904".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/07/13 11:28 |
| S83 | 13 | 174/260-266 and @py>"2001" | USPAT | OR | OFF | 2005/07/13 11:32 |
| S84 | 1104 | 174/260-266.ccls. and @py>"2001" | USPAT | OR | OFF | 2005/07/13 11:35 |
| S85 | 39 | S84 and (stand-off or standoff) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/07/13 11:36 |

| S86 | 2294 | 257/774-779.ccls. and @py>"2001" | USPAT | OR | OFF | 2005/07/13 11:35 |
|------|--------|-----------------------------------------------------------------|------------------------------------|----|-----|---------------------|
| S87 | 68 | S86 and (stand-off or standoff) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/07/13 11:37 |
| S88 | 1 | "20030215568".pn. | USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2005/07/13 16:53 |
| S89 | 2 | "6134772".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/07/13 16:54 |
| S90 | 386489 | 174$.ccls. or 361$.ccls. or 428$. ccls. or 257$.ccls. | USPAT | OR | OFF | 2005/09/30 12:03 |
| S91 | 3000 | S90 and (((Cu or copper)near laminat$3) or ((Cu or copper) near clad)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 11:57 |
| S92 | 2568 | S91 and (etch$3 or fill$2 or (standoff or (stand off) or (stand-off))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:02 |
| S93 | 1923 | S91 and ((PCB or (printed near board) or ( circuit near board) or (wiring near board))) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/09/30 12:03 |
| S94 | 125480 | 174$.ccls. or 361$.ccls. | USPAT | OR | OFF | 2005/09/30 12:03 |